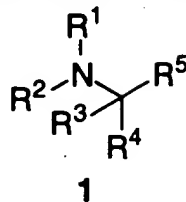


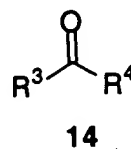
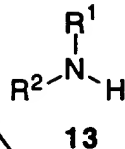
What is claimed:

1. A process for producing a compound of formula 1



5 comprising:

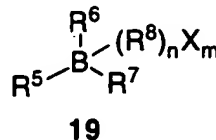
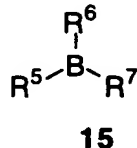
providing compounds of formula 13 and formula 14



where R¹ and R² are each independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, acyl, acylalkyl, carboxy, carboxamido, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, triarylsilyl, phosphinyl, and -YR, where Y is selected from the group consisting of -O-, -NR_a-, -S-, -SO-, and -SO₂-, and R and R_a are each independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, and acyl, or R¹ and R² together form a methylene bridge of 2 to 20 carbon atoms; and

where R³ and R⁴ are each independently selected from the group consisting of hydrogen, carboxy, carboxamido, alkyl, cycloalkyl, aryl, and heteroaryl;

providing a compound of formula 15 or a compound of formula 19



where R⁵ is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, alkenyl, alkynyl and allenyl; R⁶, R⁷ and R⁸ are selected from the group

consisting of hydroxy, alkoxy, aryloxy, heteroaryloxy, chloro, bromo, fluoro, iodo, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl, or together form a methylene bridge of 3 to 7 atoms; X is a positive counter ion, and n is 0 or 1; and contacting said compounds of formula 13, formula 14, and formula 15 or 19 to form a reaction mixture.

2. The process of claim 1, wherein said reaction mixture further comprises a Lewis acid.

3. The process of claim 1, wherein R⁶ and R⁷ are each -OR.

4. The process of claim 3, wherein n is 1, R⁸ is F, and said reaction mixture further comprises a compound of the formula SiR⁹R¹⁰R¹¹R¹², where R⁹ is selected from the group consisting of halo, alkoxy, acyloxy, triflate, alkylsulfonate and arylsulfonate, and R¹⁰, R¹¹, and R¹² are each independently selected from the group consisting of alkyl, cycloalkyl, aryl, alkoxy, aryloxy and chloro.

5. The process of claim 1, wherein R³ is carboxy.

6. The process of claim 1, wherein R⁵ is alkenyl.

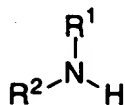
7. The process of claim 1, wherein R² is acylalkyl.

8. The process of claim 7, wherein R⁵ is alkenyl.

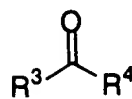
9. The process of claim 1, wherein R³ is selected from the group consisting of aminoalkyl, alkylamino-alkyl, dialkylamino-alkyl, and arylamino-alkyl.

10. The process of claim 1, wherein R³ is hydroxyalkyl.

11. A process for generating a combinatorial library, said process comprising:

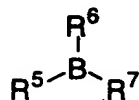


13

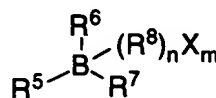


14

where R¹ and R² are each independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, acyl, acylalkyl, carboxy, carboxamido, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, triarylsilyl, phosphinyl, and -YR, where Y is selected from the group consisting of -O-, -NR_a-, -S-, -SO-, and -SO₂-, and R and R_a are each independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, and acyl, or R¹ and R² together form a methylene bridge of 2 to 20 carbon atoms; and
where R³ and R⁴ are each independently selected from the group consisting of hydrogen, carboxy, carboxamido, alkyl, cycloalkyl, aryl, and heteroaryl; providing a compound of formula 15 or a compound of formula 19



15



19

where R⁵ is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, alkenyl, alkynyl and allenyl; R⁶, R⁷ and R⁸ are selected from the group consisting of hydroxy, alkoxy, aryloxy, heteroaryloxy, chloro, bromo, fluoro, iodo, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl, or together form a

~~methylen~~ bridge of 3 to 7 atoms; X is a positive counter ion, and n is 0 or 1; and contacting said compounds of formula 13, formula 14, and formula 15 or 19 to form a reaction mixture

5

12. A combinatorial library prepared by the process of claim

21.

B'

13. A process for preparing an ACE inhibitor, said process

10 comprising:

providing a compound of the form aa-proline, where aa is selected from the group consisting of alanine and lysine; contacting said alanine-proline with 2-phenethyl boronic acid and glyoxalic acid in water to form an alkene product; reducing said alkene product by catalytic hydrogenation to form said ACE inhibitor.

14. The process of claim 13 wherein aa is alanine.

15. The process of claim 13 wherein aa is lysine.

16. A process for preparing an amino sugar, comprising:

providing a sugar;

contacting said sugar with 1,1-di(p-anisyl)methylamine and 2-phenethyl boronic acid to form an aminated alkene product;

treating said aminated alkene product with ozone and methyl sulfide to form an amino sugar.

30

17. The process of claim 16, wherein said sugar is D-arabinose.

add
B'

add
C5